

REMARKS

This present Response is being filed in reply to the Office Action dated May 13, 2010. Applicant hereby requests a two month extension of time extending the period of response to and including October 13, 2010.

By the present amendment, claims 40, 41, and 44 are amended. No new matter is added.

Request for Telephone Interview

Applicants request that the Examiner contact the undersigned to arrange for a telephone interview.

Claim Objections

Claims 40-41 and 44-46 were objected to because of various informalities. Claims 40, 41, and 44 have been amended to address the informalities noted in the Office Action.

Claim Rejections Pursuant to 35 U.S.C. § 103(a)

Claims 37-43 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lim et al. (US 2003/0208203) in view of Chin (US 2005/0065517, see Provisional Application 60/518580) and Shluzas (US 20040230100).

Lim describes an implant insertion instrument 20 for remotely holding, manipulating, and releasing a surgical implant (e.g., plate 100 or spinal rod 200) through a single pathway 130 to a surgical space in a patient. See paragraphs 37 and 46 of Lim. The instrument 20 can manipulate the surgical implant between a reduced profile orientation and an actuated orientation. The reduced profile orientation reduces the profile of the implant relative to the insertion instrument 20 and the transverse to the insertion path as the implant is inserted through the pathway 130. See paragraph 46 of Lim. This permits the opening of the pathway 130 to be smaller adjacent the skin level and larger proximate the anchors to which the implant is connected. "Thus, the amount

of tissue dissection and retraction required to accommodate insertion of implant 100 to the surgical space is minimized.” See paragraph 47 of Lim.

Claims 37-43

Claims 37-43 were rejected pursuant to 35 U.S.C. §103(a) as being obvious over Lim in view of Chin and Shluzas. As acknowledged in the Office Action, Lim fails to disclose at least the following:

- making a percutaneous incision in the patient,
- advancing a third anchor through the percutaneous incision to a third anchor site on a third vertebra adjacent one of the first and second vertebra, and
- advancing the first end of the spinal rod subcutaneously to the third anchor,

as recited in claim 37.

The Examiner asserts that Chin discloses making a percutaneous incision in the patient, advancing a third anchor through the percutaneous incision to a third anchor site on a third vertebra adjacent one of the first and second vertebra, and advancing the first end of the spinal rod subcutaneously to the third anchor. The Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time the invention was made to perform the method of Lim making a percutaneous incision in the patient, advancing a third anchor through the percutaneous incision to a third anchor site on a third vertebra adjacent one of the first and second vertebra, and advancing the first end of the spinal rod subcutaneously to the third anchor in view of Chin “to perform minimally invasive spine surgery where more than two anchors are used.” See Office Action, page 5.

Lim and Chin teach away from the combination proposed by the Examiner such that one of ordinary skill in the art would have been deterred from combining the methods of Lim and Chin in the manner asserted by the Examiner.

Lim teaches an instrument designed to facilitate the implantation of an implant through a single pathway to a surgical space. In one embodiment, the instrument 220

moves a spinal rod from a low profile orientation for insertion through a single pathway to an enlarged profile orientation, after insertion through the pathway, which allows the spinal rod to be connected to anchors through the pathway. See paragraphs 62 and 63 of Lim. In contrast, Chin discredits Lim like single pathway minimally invasive systems (as having “limited scalability” and increased tissue expansion) and describes a minimally invasive system that lacks an expandable access device, and, thus, lacks a large working space that would facilitate the manipulation of an implant between different orientations and subsequent connection of the implant to anchors. See paragraph 15 of Chin. Instead, Chin describes inserting anchors, pedicle screws 140, through separate percutaneous incisions 92a-92f and advancing a connecting device 170, such as a cylindrical rod, subcutaneously, to each of the separately positioned pedicle screws 140. One of ordinary skill in the art would appreciate these contradictory teachings of Lim and Chin and for this reason would be deterred from combining their teachings in the manner asserted by the Examiner.

At most, one of ordinary skill in the art, after evaluating the contradictory teachings of Lim and Chin, would select one of the systems/techniques as a whole or complete replacement or substitute for the other. For example, if the ordinary skilled artisan considered the systems and methods of Chin to be an improvement over the systems and methods of Lim, the ordinary skilled artisan would chose to use the entire system and method of Chin (positioning all of the bone anchors through separate percutaneous incisions and advancing the connecting device subcutaneously) rather than combining aspects of Lim and Chin as proposed by the Examiner. Only with the benefit of the Applicant’s disclosure would the ordinary skilled artisan know to combine the teachings of Lim and Chin in the manner proposed by the Examiner.

For this reason, independent claim 37, as well as claims 38-43 dependent thereon, distinguishes over Lim and Chin and Shulzas, and represents allowable subject matters. Appellant respectfully requests withdrawal of the rejection.

Claim 47

Claim 47 was rejected pursuant to 35 U.S.C. §103(a) as being obvious over Lim in view of Chin and Shluzas. The Examiner argues that Lim discloses the subject matter of claim 47 except for:

- percutaneously positioning a third anchor in a third vertebra adjacent one of the first vertebra and the second vertebra through a percutaneous incision distinct from the first incision, and
- advancing the first end of a spinal rod subcutaneously from the first incision to the third anchor.

The Examiner asserts that Chin discloses percutaneously positioning a third anchor in a third vertebra adjacent one of the first vertebra and the second vertebra through a percutaneous incision distinct from the first incision and advancing the first end of a spinal rod subcutaneously from the first incision to the third anchor. The Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time the invention was made to perform the method of Lim percutaneously positioning a third anchor in a third vertebra adjacent one of the first vertebra and the second vertebra through a percutaneous incision distinct from the first incision and advancing the first end of a spinal rod subcutaneously from the first incision to the third anchor in view of Chin “to perform minimally invasive spine surgery where more than two anchors are used.” See Office Action, page 5.

Lim and Chin teach away from the combination proposed by the Examiner such that one of ordinary skill in the art would have been deterred from combining the methods of Lim and Chin in the manner asserted by the Examiner.

Lim teaches an instrument designed to facilitate the implantation of an implant through a single pathway to a surgical space. In one embodiment, the instrument 220 moves a spinal rod from a low profile orientation for insertion through a single pathway to an enlarged profile orientation, after insertion through the pathway, which allows the spinal rod to be connected to anchors through the pathway. See paragraphs 62 and 63 of Lim. In contrast, Chin discredits Lim like single pathway minimally invasive systems (as having “limited scalability” and increased tissue expansion) and describes a minimally

invasive system that lacks an expandable access device, and, thus, lacks a large working space that would facilitate the manipulation of an implant between different orientations and subsequent connection of the implant to anchors. See paragraph 15 of Chin. Instead, Chin describes inserting anchors, pedicle screws 140, through separate percutaneous incisions 92a-92f and advancing a connecting device 170, such as a cylindrical rod, subcutaneously, to each of the separately positioned pedicle screws 140. One of ordinary skill in the art would appreciate these contradictory teachings of Lim and Chin and for this reason would be deterred from combining their teachings in the manner asserted by the Examiner.

At most, one of ordinary skill in the art, after evaluating the contradictory teachings of Lim and Chin, would select one of the systems/techniques as a whole or complete replacement or substitute for the other. For example, if the ordinary skilled artisan considered the systems and methods of Chin to be an improvement over the systems and methods of Lim, the ordinary skilled artisan would chose to use the entire system and method of Chin (positioning all of the bone anchors through separate percutaneous incisions and advancing the connecting device subcutaneously) rather than combining aspects of Lim and Chin as proposed by the Examiner. Only with the benefit of the Applicant's disclosure would the ordinary skilled artisan know to combine the teachings of Lim and Chin in the manner proposed by the Examiner.

For this reason, independent claim 47 distinguishes over Lim and Chin and Shulzas and represents allowable subject matters. Appellant respectfully requests withdrawal of the rejection.

Claims 44-46

Claims 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lim et al. (US 2003/0208203) in view of Chin (US 2005/0065517, see Provisional Application 60518580) and Shluzas (US 20040230100) further in view of Pagliuca et al. (US 2003/0073998).

Claims 44-46 depend from independent claim 37, discussed above, and are allowable at least by way their dependency on claim 37.

Conclusion

If there are any remaining issues or the Examiner believes that a telephone conversation with the Applicant's attorney would be helpful in expediting the prosecution of the application, the Examiner is invited to call the undersigned at (508) 880-8488.

Respectfully submitted,

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